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09/873,800	06/04/2001	James J. Barnat	501094	2864

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EXAMINER

ADDIE, RAYMOND W

ART UNIT PAPER NUMBER

3671

DATE MAILED: 01/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,800

Applicant(s)

BARNAT ET AL.

Examiner

Raymond W. Addie

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 and 38-72 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-25, 38-51, 53-55, 60-72 is/are rejected.
- 7) ☒ Claim(s) 52 and 56-59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6, 7, 9, 13-15, 21, 24, 25, 38, 42-46, 60-63, 65-67, 69, 71, 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry 6,444,258 in view of O'Brien # 5,895,173.

Terry discloses a roadway paving apparatus (50/84) for applying asphaltic binder material and aggregate to a ground surface comprising: A vehicle (50) having a plurality of wheels (58), a motor and gear box (60) and further having front and rear ends.

See Fig. 6, Col. 7, lines 25-67.

An aggregate dispensing system (82, 84, 86, 90, 104) carried by the vehicle and further comprising:

A plurality of input hoppers (82, 102) disposed proximate the front end of the vehicle,
and adapted to receive aggregate material.

An output hopper (86) disposed proximate the rear end of the apparatus.

The output hopper (86) converging toward a plurality of discharge ports (92), which are adapted to discharge aggregate material over the ground surface. See figs 3, 4; Col. 8, lns. 33-67.

A plurality of conveyor mechanisms (90, 96, 98 104) at least one conveyor (96) extending between an input hopper (82) and the output hopper (86).

An asphalt binder material dispensing system (66,68) carried by the vehicle (50)

separate from the aggregated material system, such that asphalt binder material and the aggregate material are not mixed prior to the aggregate material being dispensed through the discharge port. The asphalt binder material dispensing system further comprising:

A pump and valve mechanism (not shown, see col. 8, lines 11, 28).

A plurality of tanks (62, 64) for holding asphaltic binder material.

A spray bar (78, 68) disposed between the discharge port of the output hopper and the front end of the vehicle (50); adapted to spray asphalt binder material. See Col. 8, Ins. 7-32; Figs 4, 6.

What Terry does not disclose is wherein all of the wheels roll on the ground surface between the spray bar and the front end of the vehicle, such that no wheels rollover the asphaltic binder material and aggregate material that are discharged by the spray bar and through the output hopper.

However, Terry does disclose in an alternative embodiment of apparatus (50/84) that rollers (110, 112), may be added to the rear of the apparatus (50/84) in order to compact the layers (14, 16, 18). Terry further illustrates the apparatus and method of compacting the layers in fig. 4.

Likewise, Terry illustrates at least one wheel (88) for supporting the apparatus (50/84) without applying a compacting force to the binder and aggregate layer after discharge to the roadway surface. Further, O'Brien teaches a roadway paving apparatus (20), which is part of a vehicle or is towed by a separate vehicle. See col. 3, lines 37-64.

Said apparatus (20) comprising: A hopper (30) having an aggregate discharge port (35), a plurality of asphalt binder material spray nozzles (41, 42, 51, 52) each positioned behind the rearmost wheels of the apparatus (20), thereby insuring no wheels of the apparatus roll over the binder and aggregate after discharge onto a roadway surface. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of chip sealing a roadway surface of Terry, with an output hopper having a plurality of spray bars, as taught by O'Brien, in order to prevent the aggregate from being compacted during binder curing phase, as suggested by Terry. See O'Brien col. 4, lines 19-67.

In regards to Claims 2, 61 Terry discloses the binder material and aggregate are not mixed prior to application to the ground surface.

In regards to Claims 6, 7, 66, 67 Terry discloses a mechanical coupling (100) at the front end of the vehicle (54), which is adapted to selectively attach to and power a supply truck, which carries aggregate material for filling the input hopper (82). See col. 8, lines 58-67.

Terry further discloses an auger (106), in Fig. 3, disposed in the lower part of input hopper (102) and extending horizontally, transverse to the direction of travel, and further disposed above a front portion of a conveyor mechanism (104), proximate the front end of the apparatus (50). The auger spreads out the aggregate material received from the supply truck, to increase the effective holding capacity of the input hopper (102). See Col. 9, lines 1-13.

In regards to Claims 13-14, 24, 25 Terry discloses the spray bar (78) is generally parallel to the discharge port of the output hopper and is spaced in front of the discharge port. See Fig. 5 Although, Terry does not disclose a specific spacing between the spray bar and the discharge port of the output hopper; Terry does positively recite "Application of layers (14, 16, 18) is...preferably at a rate of at least 60 ft/mn(.68mi/hr)" as well as application of layers (14, 16, 18) being completed with in 10 seconds of. Hence, it is inherent, that the spray bar and the discharge port must spaced between .1 and 10 feet apart, in order to permit application, break and cure of the binder/aggregate within the preferred time range of 1-5 mins. See col. 3,ln 62-col. 4, ln 5;col. 4, ln 54-67.

In regards to claim 15 Terry discloses a method of chip-sealing a roadway surface (7) with a roadway paving apparatus (50/84). The roadway paving vehicle having a front and rear end (54, 56). Said method comprising the steps of:

Storing a supply of asphalt binder material in a tank (62, 64) on the vehicle (50).

Storing a supply of aggregate material in a hopper (102) at the front end
of the vehicle (50).

Transporting said binder material from the tank to a spray bar (68, 78) at the rear end of
the vehicle (50).

Transporting aggregate material from a input hopper (102) to an output hopper (86) at
the rear end of the roadway paving apparatus (50/84).

Spraying said binder material from the spray bar (78) at a 1st span over the roadway
surface, forming a layer of said binder material on the roadway surface (10).

Discharging aggregate material from the output hopper at a 2nd span over the layer of
said binder material.

Preventing intermixing of asphalt binder material and aggregate material prior to
discharging of aggregate material and spraying of said binder material.

See col. 7, ln 21-col. 8, ln. 58

In regards to Claims 42, 43, 44 Terry discloses the method steps of:

Selectively controlling the spraying to set a 1st span of a 1st length over which asphaltic
binder material is sprayed, and selectively controlling the discharging to set a 2nd span
of a second length over which aggregate material is discharged, Supporting the entire
vehicle (50/84) on wheels (58, 88) and operating the apparatus within a range of .3-5
miles/hr.

In regards to Claims 45, 46 although Terry does not disclose a specific spacing between the spray bar and the discharge port of the output hopper, nor disposing all the wheels of the apparatus in front of the spray bars/aggregate discharge port; Terry does disclose it is preferable to apply the aggregate onto the asphalt binder material within 10 seconds of each other, and that the apparatus can be propelled at a speed of .3-5m/hr. Hence, it is inherent that the spray bars must be disposed no more than 10 ft apart, in order to perform the chip sealing method within 10 seconds. Further, O'Brien teaches a roadway paving apparatus (20), which is part of a vehicle or is towed by a separate vehicle. See col. 3, lines 37-64. Said apparatus (20) comprising: A hopper (30) having an aggregate discharge port (35), a plurality of asphalt binder material spray nozzles (41, 42, 51, 52) each positioned behind the rearmost wheels of the apparatus (20), thereby insuring no wheels of the apparatus roll over the binder and aggregate after discharge onto a roadway surface. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of chip sealing a roadway surface of Terry, with an output hopper having a plurality of spray bars, as taught by O'Brien, in order to prevent the aggregate from being compacted during binder curing phase, as suggested by Terry. Terry See col. 4, lines 45-66.

In regards to Claims 61-63 Terry discloses a plurality of input hoppers (102, 82) proximate the front end of the vehicle adapted to receive aggregate materials and an output hopper (94) disposed proximate the rear end of the vehicle, the output hopper converging toward a discharge port. Terry further discloses the use of a plurality of binder holding-tanks (62, 64) connected to a pump and valve assembly and the spray bars (68, 78). Terry discloses the desirability to provide a fast moving paving machine and only providing 10 seconds between the time the binder material is sprayed onto the surface and the screed plate/finishing table compacts the aggregate into the binder material. See cols. 7-8.

In regards to Claims 9, 69, 71, 72 Terry discloses the use of valves for controlling flow of asphalt binder material to the spray bar, as well as the apparatus (50/84), in a 1st embodiment, being free of spreading apparatus behind the discharge port. See figs. 3, 4; col. 8, lines 1-21. Terry further discloses alternative embodiments that support the output hopper (86) with or without compacting abilities and does not provide "spreading apparatus behind the aggregate discharge ports.

2. Claims 3, 4, 16, 17, 39-41, 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry '258 in view of O'Brien as applied to Claims 1, 15, 63 respectively, and further in view of Murray # 5,000,615.

Terry in view of O'Brien discloses, or reasonably suggests, essentially all that is claimed, to include a pump mechanism disposed between a holding tank and a spray bar, as cited above, as well as apparatus for connecting to and powering a plurality of supply trucks, sequentially; for providing aggregate to the input hopper (102). Terry does not disclose how the paving apparatus is supplied with a binder material to the asphalt binder material dispensing system having up to 3 holding tanks. However, Murray teaches system for relaying pavement, comprising: An asphalt paving apparatus (10) further comprising: An asphaltic binder material holding tank (64), an input pump (68) having an input conduit (70) for receiving binder material from a supply truck (16/14) and transporting said binder material to said holding tank (64), as well as an output pump (66) disposed between the holding tank (64) and an output device (52). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the paving system of Terry in view of O'Brien with a pump mechanism having both input and output pumps, as taught by Murray, in order to resupply the paving apparatus with a binder material.

In specific regard to Claim 4, as cited above, Terry discloses a binding material dispensing system having a pump and a plurality of valves , see col. 8, lines 7-21. Murray discloses providing both input and output pumps (68, 66) for supplying the paving apparatus with a binder material. Therefore, it would have been obvious to one of ordinary skill in the art, to provide the paving apparatus of Terry with an asphalt binder supply assembly, as taught by Murray, in order to facilitate a continuous paving operation, as suggested by Terry. See Murray Col. 3; Terry Col. 8, ln. 1-col. 9, ln 14.

In regards to Claims 16, 17 Terry discloses the paving apparatus can be used in continuous paving operations, and that supply trucks, can sequentially supply aggregate material to the input hopper (102). Unfortunately Terry does not disclose providing a for resupplying binder materials. However, Murray teaches a paving method comprising the steps of: Providing a supply truck (16) to a paving apparatus (10). Said supply truck further comprising a supply tank for supplying an asphaltic binder material, and storage bins (44, 46) for processing aggregate materials to be supplied to the paving apparatus (10). Said supply truck further having a live bottom conveyor (50) for transporting an aggregate material from the storage hopper, to a paving apparatus input hopper (52). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of paving a roadway of Terry in view of O'Brien with the method step of providing a supply truck, as taught by Murray, in

Art Unit: 3671

order to provide a means to perform continuous paving operations. See Murray Figs. 1A, 1B; col. 3, 4.

In regards to Claims 40, 41 Terry discloses essentially all that is claimed, to include an providing a pair of "grippers (100)" for connecting and powering an aggregate supply truck to the front end (54) of paving apparatus (50/84), and clearly illustrates an operators station, in Fig. 3; located at, and overlooking the front of the paving vehicle and rear of a supply truck. What Terry in view of O'Brien does not specifically recite is providing the controls, for the automated transfer of asphalt binder, at an operator station. However, Murray discloses the method steps of providing an asphalt binder supply truck, having an input conduit (70) for resupplying an asphalt binder material to a paving apparatus. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of paving a roadway of Terry in view of O'Brien with controls at an operators station, as reasonably suggested by Murray, in order to provide the facilitate a continuous paving operation. See Terry cols. 8-9; Murray col. 3, fig. 1A.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terry in view of Murray as applied to claims 4, 51 above, and further in view of Jenne et al. # 6,099,616.

Terry in view of Murray discloses essentially all that is claimed, except for the use of a swivel joint in the input hose supplying the paving apparatus with binder material.

However, Jenne et al. teaches a method for recovering vapors during dispensing of a bituminous product into a holding tank mounted to a vehicle. Said apparatus further comprising: An input conduit (18) having a swivel joint (46) for flexibility when positioning the input conduit. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the paving apparatus of Terry in view of Murray, with an input hose having a swivel joint, as taught by Jenne et al., in order to provide flexibility in the conduit, when a paving apparatus is coupled to a supply truck.

4. Claims 8, 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry in view of, O'Brien as applied to Claims 7, 67 Benedetti et al. # 4,765,772. Terry in view of O'Brien discloses essentially all that is claimed, except for the use of an input hopper having expansion wings. However, Benedetti et al. teaches a paving machine, consisting of a hopper (11) having expansion wings (13) at opposed sides of the input hopper. Said wings pivoting from a lower position wherein a 1st horizontal spacing is defined between the expansion wings to a raised transport position wherein a 2nd horizontal spacing is defined between the expansion wings, that is less than the 1st horizontal spacing. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the paving apparatus of Terry with an input hopper having expansion wings, as taught by Benedetti et al. in order to provide a

Art Unit: 3671

means to urge aggregates toward the center of the hopper; as reasonably suggested by Terry, col. 9, lines 7-9; see Benedetti et al. col. 6, line 65-col. 7, line 14.

5. Claims 10, 11, 12, 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry in view of O'Brien as applied to Claims 9, 69 and further in view of Hill # 5,234,128.

Terry in view of O'Brien discloses essentially all that is claimed, to include:

1st and 2nd endless belt conveyors (96, 98) that extend diagonally and rearwardly for supplying aggregate to 1st and 2nd bins (92, 94). Said 1st & 2nd bins comprising a chute, for guiding aggregate material in an adjustable width dimension.

See col. 8, Ins. 57

A plurality of control valves for controlling the flow of binder material to the spray bar.

What Terry in view of O'Brien does not disclose is the specific structure of width adjustable bins (92, 94).

However, Hill teaches an aggregate material spreader comprising: A plurality of gates (14) dividing a discharge port (36). The gates having open and closed positions, for controlling the volume of aggregates discharged.

The output hopper further having a chute (as seen in Fig. 1) for receiving an aggregate material from an upwardly and rearwardly disposed conveyor mechanism,

A control unit (51) to control speed of the conveyor mechanism and opening and closing of the gates (14). Said hopper (10) having expansion bins (11, 12,13), controlled by additional gates (14), for varying the width of aggregates being spread.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the apparatus of Terry in view of O'Brien with a aggregate dispensing system, as taught by Hill, in order to provide a means to accurately meter and spread aggregates onto the surface, as reasonably suggested by Terry. See Terry Col. 8, lines 1-15; Hill Col. 4, lines 40-col. 6, line 39.

In regards to Claims 12, Terry discloses a width adjustable spray bar (78). See col. 8, lines 14-32.

6. Claims 16-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry '258 in view of O'Brien '173 as applied to Claim 15 and further in view of Bowers # 3,260,176

Terry in view of O'Brien discloses, or reasonably suggests, essentially all that is claimed, to include the method steps of:

Providing a supply truck. Linking said supply truck to said paving apparatus (50/84).

Powering said supply truck from said paving vehicle so that both vehicles travel forward in unison. Mobilizing aggregate material from said supply truck to said input hopper (102) of said paving apparatus (50/84). Selectively controlling valves of the spray bar to vary the width of the asphalt binder layer being sprayed onto the roadway. Selectively

Art Unit: 3671

controlling the width of the output hopper discharge ports (92, 94) in order to control the width of the aggregate layer being applied onto the asphalt binder layer.

Supporting the entire roadway vehicle with wheels disposed entirely in front of the spraying of asphalt binder material and discharging of aggregate material, such that no wheels roll over sprayed asphalt binder material or aggregate material; see O'Brien.

What Terry in view of O'Brien does not disclose is providing a single supply truck having both aggregate and asphalt binder supplies. However, Bowers discloses it is desirable to provide a single supply truck having a hopper (50), for storing aggregates, and a storage tank (12) for storing asphalt binding materials; and control apparatus (77, 98, 49, 84, 63) proximate the tail gate of the dump body (11), for controlling discharge of paving materials. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the method of chip sealing a roadway, of Terry in view of O'Brien, with the method steps of providing a supply truck having both asphalt and aggregate supply capacity, as well as providing controls near the end of the tail gate, such that an operator control the discharge of materials from said supply truck, as reasonably suggested by Terry. See Bowers col. 2-3.

7. Claims 47-49, 51, 53, 54, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terry 6,444,258 in view of Kilheffer et al. # 5,590,976.

Terry discloses a roadway paving system for chip sealing a roadway surface comprising essentially all that is claimed, as put forth with respect to claim 1 above, to include

Art Unit: 3671

providing a plurality of supply trucks, sequentially to resupply said paving apparatus with additional aggregates, for a continuous paving operation.

What Terry does not disclose is connecting the paving machine to a supply truck having a supply of asphalt binder and aggregate materials. However, Kilheffer et al. teaches mobile paving system comprising: a paving vehicle (10) having a plurality of aggregate hoppers (12, 14) and a plurality of binder material storage tanks (18, 20). Kilheffer et al. further teaches the desirability to provide means (70) to receive additional paving materials from a plurality of supply trucks. Said means (70) further comprising:

A link (70), such as a transfer conduit between a 1st supply truck and the paving vehicle (10), and wherein the aggregate material is transferred from a supply hopper to the aggregate dispensing system. Further wherein, the asphalt tank and aggregate material dispensing system have a sufficient holding capacity such that said 1st supply truck and be unlinked from the roadway paving vehicle and a 2nd one of the supply trucks may be linked to the roadway paving vehicle with continuous application of asphalt binder material and aggregate material without stopping the roadway paving vehicle. See 3, lines 40-45, 5, line 49-col. 6, line 12. Therefore, it would have been obvious to one of ordinary skill in the art, to provide the paving apparatus of Terry, with a refill system, as taught by Kilheffer et al., in order to perform continuous paving operations; as reasonably suggested by Terry, see cos. 8-9.

Art Unit: 3671

In regards to Claims 48, 49 O'Brien discloses essentially all that is claimed, to include: A sprayer, comprising at least 1 spray bar (40) having a plurality of nozzles (41, 42), a plurality of wheels (60) for support, and being disposed in front of the spray bar and discharge chute (32), such that no wheels roll over asphalt or aggregate that have been applied to the roadway surface. O'Brien further discloses an output hopper (30) having a discharge chute (34), a conveyor mechanism extending between a supply of aggregate and the output hopper (30). What O'Brien does not disclose are the structural features of the vehicle (not shown), that provide aggregate and binder material to the paving apparatus (20). However, O'Brien does positively recite "apparatus (20) either forms a part of a self-propelled carrier vehicle (not shown) or is towed by a separate vehicle (also not shown)". Further, Kilheffer et al. teaches a mobile paving system comprising a self-propelled vehicle (20) comprising: An input hopper (12) an output hopper (24) both having a discharge port, and conveyor system (22, 23, 28) transporting aggregate material between said input and output hoppers. Kilheffer et al. further teaches a variable speed displacement pump (64), disposed between said storage tanks (18, 20) and a discharge port. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the paving apparatus of O'Brien, with an input hopper and asphalt pump, as taught by Kilheffer et al., in order to perform a continuous paving operation. See col. 3, col. 4, lines 20-37, col. 5, lines 38-43.

Art Unit: 3671

In regards to Claims 51, 53-55 Terry discloses an operators station disposed overlooking the input hopper (102) and the grippers (100) as well as, providing the spraying of the binder material and the discharge of the aggregate material are spacedly, adjacent one another, as illustrated in Fig. 3.

Terry further discloses operating the paving apparatus at speeds of .3-4.5 m/hr. and applying the asphalt binder and aggregate within 10 seconds of each other. Hence, it is inherent, at the cited delivery rates and speed of travel the asphalt and aggregate discharge ports must be spaced within 1-10' of one another.

Terry does not disclose the specifics of the supply trucks. However, Kilheffer teaches a paving system having an operators' station, an input conduit (70) fluidically connected to the transfer conduit through a detachable hydraulic coupling the supply truck may have a conveyor mechanism in the supply hopper adapted to convey aggregate material into the input hopper of the paving apparatus. See Col. 5, lines 49-61. Kilheffer et al.

further teaches paving the roadway within a ground speed range of ½-3 mph.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the paving apparatus of O'Brien with a carrier vehicle capable of being refilled by supply trucks, while paving operations continue between ½ and 3 mph, as taught by Kilheffer et al., in order to perform continuous paving operations.

Art Unit: 3671

8. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Terry in view of Kilheffer et al., as applied to claim 51 above, and further in view of Jenne et al. # 6,099,616.

Terry in view of Kilheffer et al. discloses essentially all that is claimed, to include the use of a refill apparatus comprising a plurality of hoses and other mechanical devices for fluidly connecting a supply truck to said asphalt dispensing system; but does not disclose the use of a swivel joint in the input hose supplying the paving apparatus with binder material. However, Jenne et al. teaches a method for recovering vapors during dispensing of a bituminous product into a holding tank mounted to a vehicle. Said apparatus further comprising: An input conduit (18) having a swivel joint (46) for flexibility when positioning the input conduit. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the paving apparatus of Terry in view of Kilheffer et al., with an input hose having a swivel joint, as taught by Jenne et al., in order to provide flexibility in the conduit, when a paving apparatus is coupled to a supply truck.

Allowable Subject Matter

9. Claims 52, 56-59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Art Unit: 3671

10. Applicant's arguments with respect to claims 1-72 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Warnock # 4,423,980 discloses a truck mounted paving apparatus. Wood et al. # 5,911,362 discloses a control system for a mobile material distribution system.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Addie whose telephone number is (703) 305-0135. The examiner can normally be reached on Monday-Friday from 8:00 am to 2:00 pm, 6-8 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached on (703) 308-3870. The fax phone number for this Group is (703) 305-8623.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

Application/Control Number: 09/873,800

Page 21

Art Unit: 3671



Thomas B. Will
Supervisory Patent Examiner
Group 3600

RWA
1/26/2003